

**Advisory Action**  
**Before the Filing of an Appeal Brief**

**Application No.**

10/587,583

**Applicant(s)**

HUGHES ET AL.

**Examiner**

KADE ARIANI

**Art Unit**

1651

***--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

THE REPLY FILED 29 September 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1-21.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: The claims remain rejected for the reasons of record.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Leon B Lankford/  
Primary Examiner, Art Unit 1651

Applicant argues that the only separation stages taught by Hughes are in stage (iii) and stage (iii) does not treat a fermentation liquor. However, stage (vii) of Hughes recite "separating the fermentation product from the broth characterized in that the separation stage(s) in step (iii) is/are assisted by flocculation of the solid by-product employing one or more flocculating agents ... water-soluble polymers, water swellable polymers and charged particles". Therefore Hughes teaches the claimed process.

Applicant argues that the combination of Verser, Coffey and Savage do not rendered the claim invention obvious.

However, Verser et al. teach a fermentation liquor (broth) produced in a fermentation process for the production of a fermentation product (ethanol and acetic acid), in which the liquor has been subjected to distillation (column 3 lines 38- 66, column 15 line 1-4, 27-29, and 64-67, column 16 lines 7-16). Verser et al. further teach the ethanol is removed from the water stream which is discharged from the column and separated by a simple liquid-solid separation into the solid base for recycle (column 16 lines 6-16, 22-30). Verser et al. teach the net effect of the reactive distillation process is to recover the acetic acid from the dilute salt solution thereby producing a relatively concentrated product stream, and without vaporizing the water that forms the bulk of the stream. The integration reduces the energy requirement, and simultaneous removal of the product shifts the esterification equilibrium and leads to higher conversion in a short time (column 16. lines 26-34).

Verser et al. do not teach the treatment system comprises an anionic polymer, the treatment system further comprises addition of a cationic polymers, and the treatment system further comprises addition of a siliceous material. However, Coffey et al. teach subjecting a liquid to a solid-liquid separation stage, the treatment system comprising polymers derived from cationic and anionic monomers, siliceous material, bentonite, and use of such polymers for displacing unwanted soluble or colloidal materials from an aqueous cellulosic suspension as well as to increase the efficiency of the dewatering. Coffey et al. also teach mechanical dewatering (press dewatering) (see Abstract, 0002, 0006, 0022-0029, 0030, 0031, 0075-0078, and 0108).

Moreover, Savage teaches a process of separating suspended solids (solid liquid separation) from a fermentation liquor by subjecting the liquor to treatment system comprising cationic and anionic polymers (flocclulants) to clarify the fermentation liquor, acrylic acid, maleic acid (see Abstract, column 2, lines 52-67, and column 3, lines 6-9). Savage teaches synthetic polymer with an anionic monomer content of at least 50 wt% (about 5 to 95 mole %) (Column 2, lines 24).

Therefore, a person of ordinary skill in the art at the time the invention was made could have been motivated to modify the process of Verser et al. according to the teachings of Coffey et al. and Savage by applying the solid-liquid separation system in order to provide a process of separating suspended solids from fermentation liquor with predictable results. The motivation would be to improve the efficiency of the dewatering, and increase the efficiency of the process by lowering the cost and energy. The claims would have been obvious because one of ordinary skill in the art would have been capable of applying a known solid-liquid separation technique to a known method that was ready for improvement and the results would have been predictable to one of ordinary skill in the art.